

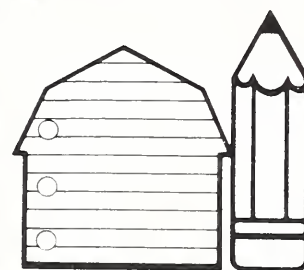
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Ag in the Classroom

Notes

United States
Department of
Agriculture



A bi-monthly newsletter for the Agriculture in the Classroom program. Sponsored by the U.S. Dept. of Agriculture to help students understand the important role of agriculture in the United States economy. For information, contact: Shirley Traxler, Director, Room 234-W, USDA, Washington, D.C. 20250. 202 447-5727

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Vol. 1, No. 5

Message From Secretary Lyng

For some time now the Nation's attention has been focused on agriculture. Daily newspapers, radio and television programs, magazines, and movies constantly remind us of the enormous system that clothes, feeds and shelters us and millions of others throughout the world. It is clear that agriculture is basic to our national survival.

Just as agriculture has been in the national spotlight, so has education. At a recent meeting in Hilton Head, South Carolina, the Nation's Governors named education their top priority. Americans are demanding quality schools that will teach students to understand and to function in the real world. Education, too, is basic to our nation's survival.

Now that we have the country's attention in these two crucial areas—agriculture and education—the time is ideal for further growth of Ag in the Classroom programs. There is tremendous educational value in studying and understanding the impact agriculture has on our economy, society, and the

world. Agricultural issues are wide-ranging and complex. Land use, resource allocation, world trade and hunger, are but a few of the issues young people will have to consider in the future. Helping students understand them is what Ag in the Classroom is all about.

It's not just those of us in agriculture who believe that agriculture is important in the classroom. Educators are recognizing it as well. This year high school debate coaches across the country chose agriculture as the National high school debate topic.

Thank you for the time and effort you have given to the Ag in the Classroom program. Your achievements in awakening America's young people to agriculture have gone a long way toward developing citizens who are capable of making decisions that are good for agriculture and for the country.

You have my strong support as you continue this important work.



U.S. Secretary of Agriculture,
Richard E. Lyng

Ag Career Opportunities Update

Indeed, America's food and agricultural system is one of its greatest success stories. Nearly everyone uses the products of our science-based food and agricultural industry.

As the demand for more cost-efficient production methods and agricultural products grows in the years ahead, many highly qualified scientists and professionals will be needed to advance the frontiers of knowledge and technology. One of the most crucial variables in the food equation of the future is our scientific and professional human capital.

A USDA national assessment of employment opportunities for college graduates in the food and agricultural sciences indicates that, during the next

five years, US colleges and universities are expected to produce insufficient numbers of graduates with food and agricultural expertise to fill important scientific and professional positions. More than 48,000 employment openings are projected annually for new college graduates with expertise in agriculture, natural resources, veterinary medicine and closely allied fields. Yet, fewer than 44,000 qualified college graduates are anticipated each year, resulting in an annual shortfall of about ten percent.

The findings of the 1985 national assessment of projected graduates and employment opportunities

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From the Director

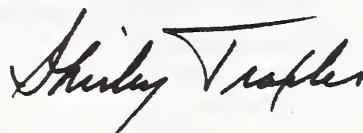
Dear Readers,

On the back page of "Notes," we list the state contacts for Ag in the Classroom. These contacts are usually elected or appointed by state committees and ordinarily serve for a certain period of time.

We appreciate the hard work of the state contacts. They serve both as the main communication link between the national office and their home state, and as the coordinator of all Ag activities within the state.

Most former state contacts continue their involvement in Ag in the Classroom. To those who have stepped aside this year, thank you for your important contributions. And best of success to the new state contacts.

To Guam, we extend a very special welcome to the Ag in the Classroom network.



Shirley Traxler

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through 1990 are categorized by six major occupational areas. Highlights of the study are as follows:

Scientists, Engineers and Related Specialists

Almost 14,000 openings are projected annually for food and agricultural scientists, engineers, and related technicians. Data on degrees granted by US colleges and universities indicate that about 11,600 qualified graduates will be produced each year.

Net: Approximately 2,400 more jobs than available graduates to fill them each year

Marketing, Merchandising, and Sales Representatives

Data indicate that slightly more than 13,000 qualified graduates will become available during each of the next five years to accept positions as marketing, merchandising and sales representatives. However, more than 15,800 employment opportunities are projected annually for new college graduates with requisite expertise in agriculture, natural resources or veterinary medicine.

Net: Almost 2,800 more jobs than available graduates each year

Education, Communications, and Information Specialists

Some 4,600 qualified graduates are expected to be available each year to compete for the projected 3,000 annual US employment openings for educators, communicators, and information specialists in agriculture, natural resources, and veterinary medicine. However, strong public interest in nutrition and health should contribute to expanding opportunities for educators and communicators with these specializations.

Net: Nearly 1,600 fewer jobs than available graduates each year

Social Services

Annually, more than 4,300 qualified college graduates are projected to be available to accept social services positions in the food and agricultural sector. However, there will be 5,400 annual openings for these professionals. Food and health inspectors, outdoor recreation coordinators, regional planners, and community development specialists are among the occupations included in this employment category. The most significant shortages are forecast for dietitians and nutritionists.

Net: About 1,100 more jobs than available graduates each year

Agricultural Production Specialists

Higher education data indicate that more than 4,200 qualified college graduates will be produced annually through 1990. Yet, fewer than 3,800 annual openings are projected for college graduates who plan to become farmers, farm managers, ranchers and other producers.

Net: More than 400 fewer jobs than available graduates each year

Managers and Financial Specialists

Slightly more than 6,900 new college-educated managers and financial specialists having food and agriculture expertise will be required annually through 1990. Approximately 5,800 qualified college graduates are expected to be available each year. The most notable deficiency will be for masters' graduates with strong agribusiness or financial analysis credentials.

Net: More than 1,100 jobs than available graduates each year

In summary, basic plant and animal research, food and fiber processing, and agribusiness management and marketing are expected to provide the most significant employment opportunities for college graduates with expertise in agriculture, natural resources, and veterinary medicine through 1990. In contrast, college graduates seeking positions in production agriculture, education, and communications will encounter strong competition for somewhat limited employment opportunities.

Spotlight

Cleo Cleveland

Cleo Cleveland, Director of the Center for Economic Education at the University of North Dakota (UND) at Grand Forks, is dedicated to teaching educators the important role agriculture plays in our economy. An economics professor during the academic year, Mrs. Cleveland has coordinated the "Economics of Agriculture" seminar for the past six summers. The seminars, which are held on the campus of UND, are attended by both elementary and high school teachers.

Each year the seminar focuses on a particular aspect of agriculture. Past seminars had titles like "Economics of Agricultural Trade," and "Economics of Entrepreneurship."

"These seminars open people's eyes to the tremendous impact of agriculture on our nation's economy," said Mrs. Cleveland.

The "Economics of Entrepreneurship" seminar, which focused on the growing entrepreneurial spirit in rural America, earned national recognition for which Mrs. Cleveland was awarded the Freedoms Foundation Award by the Freedoms Foundation at Valley Forge, Pennsylvania. "I did this seminar to provide an opportunity for teachers to learn entrepreneurship provides off-farm employment for people in a rural area," she commented.

During this past summer's seminar, "Economics of Agriculture: Focus on Food and Finance," 40

North Dakota educators visited the Minneapolis Federal Reserve Bank and the Minneapolis Grain Exchange. Participants had a firsthand look at the laws of supply and demand that govern sales, as they witnessed buyers actually feeling, tasting and smelling grain for proper quality.

Teachers also saw North Dakota barley processed into beer at St. Paul's Coors brewery, and home economists demonstrate food retailing and dietary delights using the state's commodities at a shopping center.

The seminar was highly praised by its participants, and many requested that the tour be repeated next year. "I gained more pride in North Dakota's farmers," said one educator. "They help form the basis for the economic well-being of the American people."

Mrs. Cleveland would like to extend the scope of her seminars by leading a national teachers' seminar. She believes that the seminar would ultimately benefit hundreds of students. "It's very important for teachers throughout the US to understand agriculture, so they may pass it on to the students. I welcome the opportunity to work with more teachers and encourage any suggestions they have regarding this seminar."

For more information, contact: Mrs. Cleo Cleveland, Box 8255, University of North Dakota, Grand Forks, N.D. 58202



Mrs. Cleo Cleveland, Director of the Center for Economic Education at the University of North Dakota.



Mrs. Cleveland's most recent Economics of Agriculture seminar, entitled "Focus on Food and Finance," was held June 9-10.

Regional Conference

There will be a regional Ag in the Classroom conference for western states, March 5, 6, and 7 in Sacramento, California. The meeting will include representatives from Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

Mark Linder, state contact for Ag in the Classroom in the host state of California invites all who are actively involved in Ag in the Classroom in

these states to attend. Kick-off for the conference will be an optional tour of the Napa Valley from 10:00 a.m. to 5:00 p.m. on Thursday, March 5 and adjournment will be at 2:30 p.m. on Saturday, March 7.

Registration materials will be distributed in early January. For more information, contact Mark at California Farm Bureau, 1601 Exposition Boulevard, Sacramento, California 95815, or call 916/924-4380.

Farm and Food Bytes

People say you can take the boy out of the country, but not the country out of the boy.

And who wants to? Now, thanks to a new computer program called "Farm & Food Bytes," teachers can put some of the country into the city classroom.

The software helps fourth, fifth and sixth graders become more familiar with farming and agriculture while they learn computer skills.

"Farm & Food Bytes" is an enrichment exercise for science, math, social studies, and language arts that also includes an "Ag Games" component.

Science subjects deal with plant and animal identification, nutrition, and animal reproduction; math studies focus on farm production decisions; the social studies segment explores careers in agriculture; and the language arts section provides spelling lessons based on agricultural terms.

Pat Wilson, an Iowa teacher who has used "Farm & Food Bytes" for more than a year in her classroom, is especially enthusiastic about one of the Ag Games called "Modern Farming."

In "Modern Farming," students undertake the role of the farmer and are completely responsible for the farm business. They make all the decisions real farmers do. They face up to labor costs, crop sales, feed purchases, natural disasters and even embargoes. At the end of the month, they learn how well their business has fared.

"This exercise not only illustrates the farmer's need to use keen math, planning and operational skills, but also helps to dispel the common hayseed stereotype," says Wilson.

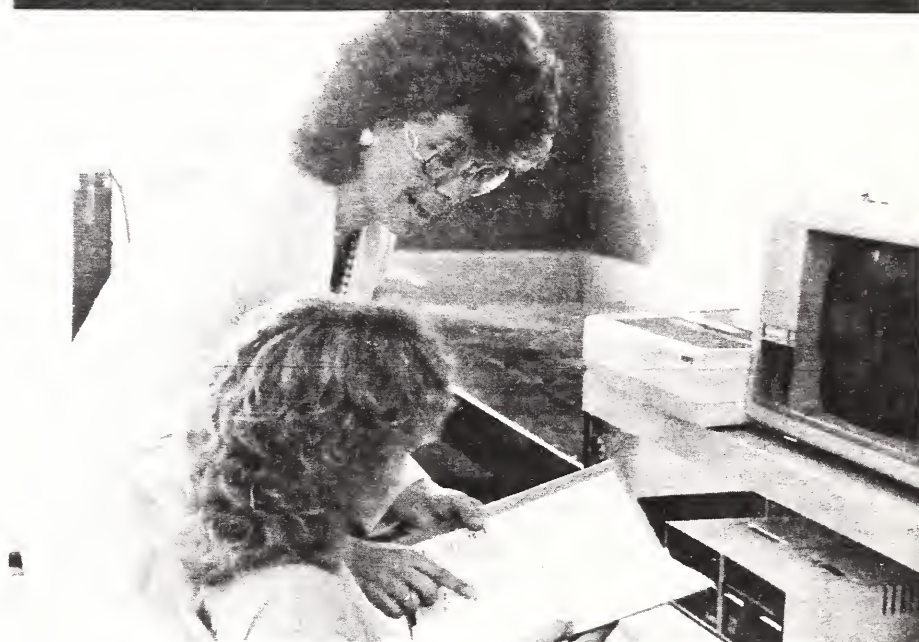
According to Wilson, each component of the software provides a good introduction to related classroom activities. For example, after a language arts exercise on the computer, students can complete related crossword puzzles at their desks.

One of the science sections concerns nutrition. The students are told to go to the store and buy groceries for one day's serving of a well-balanced diet for a family of 4.

The idea for the program developed out of the

Ag in Iowa Committee, which consists of the Iowa Farm Bureau, Iowa Department of Agriculture, Iowa commodity groups and the Iowa State University. The committee was also responsible for putting together the state's Ag in the Classroom curriculum guide for teachers 3 years ago.

Kathy Roth Eastman, former rural programs specialist at the Iowa Department of Agriculture, said they pursued the idea to create a computer



program because, while many schools owned or were planning to buy computers, there were no programs available for younger students to use that dealt with agriculture.

"Farm & Food Bytes" (with teacher's guide and student's manual) is available through the American Farm Bureau Federation. Marsha Purcell, Director of Agricultural Education for the Farm Bureau, says "Farm & Food Bytes" is being used in more than a dozen states, and schools in several other states have recently expressed interest in using the program.

For more information, contact any state Farm Bureau office.

Already ten states have developed special versions of Farm & Food Bytes that contain towns, cities, rivers and activities specific to the state's agriculture.

Missouri Ag is Out of this World

Missouri Agriculture in the Classroom has gone "out of this world" to teach children about agriculture.

"Mr. Jay in Farmland," traces the adventures of a visitor from outer space who has landed on a Missouri farm. As the "Farmer" family introduces "Mr. Jay" to the workings of their farm, readers learn about agriculture.

Written by Dr. Grace McReynolds, director of curriculum development for the Missouri Department of Education, the 4-book series is designed for students from kindergarten through 3rd grade. "We really think we have a winning combination," exclaimed Dr. McReynolds.

Each set of books also has accompanying teacher's manuals. The "Other Things to Do"

section of these manuals contains listings of topic-related poems and books.

"I believe it's important to start teaching agriculture early in a child's life—the earlier the more lasting," said Dr. McReynolds of her 3-year writing project. And Dr. McReynolds has been expounding this philosophy for many years. Before Mr. Jay landed in Missouri, children were learning about the importance of nutrition in her book "Kitchens Are For Kids."

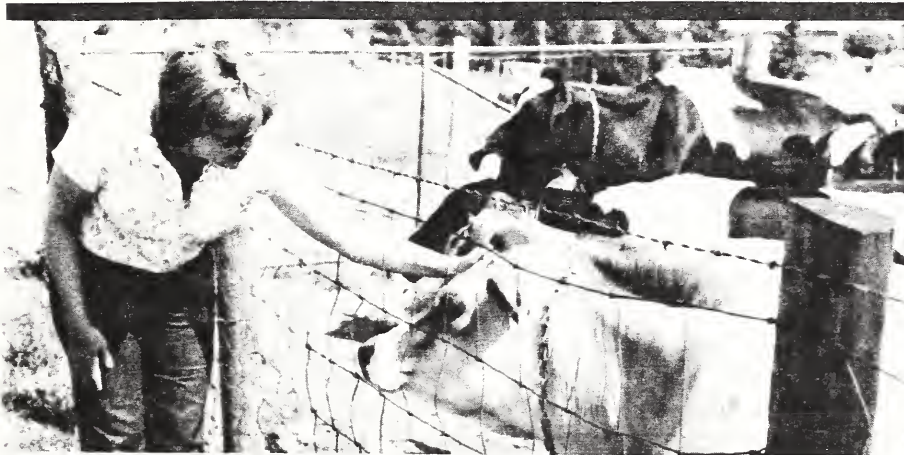
Missouri Ag in the Classroom has formed a committee to distribute more than 1,600 sets of "Mr. Jay" to the state's elementary schools. Additionally, the committee will serve as a resource for teachers.



For more information, contact:

Diane Olson, Missouri Ag in the Classroom

This past summer, Virginia Tech in Blacksburg, Virginia offered fourth-grade teachers a three-credit graduate course on implementing agriculture in the elementary classroom. The course was



Mary Washburn, a fourth-grade teacher at Narrows Elementary School in Giles County, Virginia, learns the "nuts and bolts" of dairy farming on a Virginia Tech-sponsored field trip.

taught by John Hillison, an associate professor of agricultural education at the university.

"The major emphasis of the course centered on the basics of agriculture," said Hillison. "We took field trips to Virginia Tech dairy, swine and horticulture farms, as well as to a local beef farm. We also presented guest speakers to the class, including a district conservationist for the Soil Conservation Service, a forester, and an agricultural economist, who outlined the relationship between agriculture and the economy."

In addition to basic agricultural content, the "nuts and bolts" of presenting Ag topics to students were emphasized. Films and slide sets targeted to the fourth-grade level were shown to the teachers.

Finally, teachers wrote implementation plans, designed bulletin boards, and gave demonstrations of ways they will incorporate the study of agriculture into their curriculums.

Upon completion of the course, students are able to:

- Describe the purpose of Ag in the Classroom.
- Conduct experiments related to agriculture.
- Conduct a field trip to emphasize the major concepts of Ag in the Classroom.
- Design bulletin boards to emphasize the major points of agricultural study.
- Identify sources of resource help.
- Define glossary words associated with agriculture.

The Virginia Farm Bureau, in cooperation with the State Department of Education, is printing 30,000 student manuals and 2,500 teacher manuals in an effort to encourage teachers to include Ag in their fourth-grade classrooms.

Thirty sets of the manuals, written by John Hillison and Professor Stanley Burke, will be distributed to each Virginia elementary school.

For more information, contact: John Hillison, Associate Professor, Agricultural Education, College of Education, Virginia Tech, Blacksburg, Virginia 24061

Arizona Brings the Farm to Its Schools

Standing behind its motto "Supporting Agriculture and Youth in the Southwest," the Southern Arizona International Livestock Association (SAILA) has created an agricultural school tours program for Tucson elementary students.

The 52-year old non-profit organization, which traditionally presents livestock and ranch shows, now provides 3rd through 5th graders with a "hands on" approach to learning—SAILA brings the farm to the students.

SAILA sets up portable corrals full of farm animals on school playgrounds. Ed Kruse, SAILA program manager, says, "There's something about having that animal there that catches the children's interest. Many of these kids had never even touched a horse or calf. Already more than 6,000 students have experienced the program."

In addition to livestock, the SAILA program teaches students about farm commodities, by featuring samples of products such as cotton, wheat and barley. Students also learn about the effects of climate on agriculture, while they discover the different crops of northern and southern Arizona. SAILA takes its program one step further by providing workbooks to students prior to the tour.

Kruse continued, "The program provides a great



Two natives of southern Arizona become better acquainted.

opportunity for those kids that have never had a chance to join 4-H or Future Farmers of America (FAA). It's very important for the children to know where their food comes from."

The agricultural tours program, which plans on expanding during the '86-'87 school year to all elementary grade levels, began in September 1985, in cooperation with the Pima County Cooperative Extension Service.

For more information contact:

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The individuals listed here are key reference persons in each state. If you have any questions, want to make reports, or need more information about your state's Ag in the Classroom program, contact the following:

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